TITLE 326 AIR POLLUTION CONTROL BOARD

LSA Document #00-68

SUMMARY/RESPONSE TO COMMENTS RECEIVED AT THE FIRST PUBLIC HEARING

On February 2, 2000, the air pollution control board (board) conducted the first public hearing/board meeting concerning the development of new rule, 326 IAC 20-13 and amendments to 326 IAC 15-1-2 and 326 IAC 15-1-3. Comments were made by the following parties:

Improving Kids' Environment Advocacy Coalition	(IKE)
Exide Corporation	(EC)
Quemetco Incorporated	(QI)

Following is a summary of the comments received and IDEM's responses thereto.

Comment: Unlike the other criteria pollutants, lead does not go away. It simply accumulates in the environment where children can be constantly exposed to it. Emission limits on lead smelters should be consistent throughout the state. Citizens in Muncie deserve the same level of protection afforded to people in Indianapolis when it comes to lead smelters. Although the primary sources of lead poisoning seem to now be lead-based paint and residues in soil, it is very important to make sure that increases of lead emissions from smelters do not occur given the tremendous health impact of lead on children. We need this rule to keep the limits tight so that the margin of error Exide talks about is not taken advantage of; so they have a tighter margin of error for the sake of the kids.

Housing and Urban Development (HUD) adopted a final rule that demonstrates the economics of preventing lead poisoning through housing rehabilitation. There is a direct correlation between a kid's IQ and the amount of lead in blood. Each microgram per deciliter (one ug/dL) increase in blood lead level reduces the lifetime earnings potential of a one-year-old child by two thousand three hundred sixty-seven dollars ($2367). Estimated implementation costs of this HUD rule is about $500 million during its first five years. Despite the high price tag, the benefits over the first five years are expected to exceed two billion five hundred million dollars ($2,500,000,000), mostly in increased lifetime earnings of the young children who will benefit from the regulation (64 FR 50186, September 15, 1999). (IKE)

Response: IDEM appreciates the comments on the health and social costs of elevated blood lead levels in children and the support for this proposed rule.

Comment: Quemetco supports IDEM's efforts to make the requirements for secondary lead smelters uniform throughout Indiana and to consolidate these requirements into a single

regulation. Quemetco remains confident that it will comply with the proposed standards, many of which were derived from other state provisions already applicable to Quemetco. (QI)

Response: IDEM appreciates Quemetco's comments on this proposed rule.

Comment: Quemetco respectfully requests that IDEM petition U.S. EPA to immediately repeal the related Indiana state implementation plan (SIP) provisions as set out for Quemetco at 40 CFR 52.770(c)(70) and 40 CFR 52.770(c)(95)(i)(A) that are being replaced by this rule. The provisions of the SIP are not consistent with the proposed regulations, and also do not reflect the current permitted configuration of Quemetco's facility. (QI)

Response: IDEM will undertake appropriate action subsequent to the consideration by the board for final adoption of the proposed rule to assure that inconsistencies between state rules and the state implementation plan provisions are resolved as timely as possible.

Comment: Exide respectfully requests that the proposed rule be reconsidered at a subsequent board meeting pursuant to IC 13-14-9-5(c)(3) and IC 4-22-2-26(d), so that Exide may have an adequate opportunity to prepare comments on staff's latest proposal. Exide did not receive IDEM's latest draft rules and Response to Comments from the Second Notice of Comment Period published April 1, 1999 until January 28, 2000. Therefore, Exide has had little time to consider the latest rule revisions in light of IDEM's response to comments, in order to prepare adequately for this hearing, and simply requires more time to respond to IDEM's latest proposal. For example, IDEM's response to comments states: "This is the first compilation of U.S. EPA statements and data, public comments on the MACT rulemaking, and IDEM test reports, that supports IDEM's draft rule." (EC)

Response: IDEM believes that Exide has been given sufficient time to prepare for the first hearing. IDEM has worked cooperatively with both affected facilities on technical and policy issues during the past year. With very few exceptions, the draft rule provided to Exide and Quemetco in advance of the first hearing was consistent with the draft rule published for the second public comment period. The agency looks forward to continued dialogue with the commenters, and any other interested parties, prior to scheduling the rule for final adoption by the Air Pollution Control Board.

Comment: IDEM cannot rewrite the federal NESHAP applicable to secondary lead smelters in a state rulemaking proceeding. IDEM seeks to justify the proposed rule principally by asserting that U.S. EPA was mistaken in its determination of appropriate limits. U.S. EPA has already promulgated a secondary lead smelter NESHAP and IDEM has not challenged U.S. EPA's reasoning behind that NESHAP until this rulemaking. Virtually all of IDEM's arguments, in its response to Exide's comments, are criticisms of a federal rulemaking process that is now beyond legal challenge. Because the existing federal NESHAP has passed muster under all applicable federal rulemaking proceedings and CAA requirements, a new state NESHAP is not necessary to implement the CAA. IDEM has spent considerable time and effort on the proposed

rulemaking, but it is too late to rewrite the federal standard or question U.S. EPA's discretion in interpreting its own governing statutes and rules. In general, IDEM relies on U.S. EPA studies rather than state rulemaking requirements to justify a new state NESHAP. IDEM's reliance is particularly misplaced because the U.S. EPA studies have apparently resulted in a NESHAP far less stringent than what IDEM now proposes. (EC)

Response: It is not IDEM's intent to rewrite the federal NESHAP in this rulemaking. Section 112(d) of the Clean Air Act (CAA) contains a provision clearly allowing States to retain their own more stringent emission standards when a NESHAP is promulgated. No NESHAP standard "shall be interpreted, construed, or applied to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established" under State authority.

IDEM's rationale for the specific requirements of the proposed rule are laid out in detail in the department's Response to Comments from the Second Comment Period.

Comment: IDEM has not sufficiently demonstrated a need for the proposed secondary lead smelter NESHAP, in terms of IC 13-14-8-4, particularly in relation to the proposed emission limits, which in some cases are four (4) times more stringent than the existing federal rule. IDEM must instead show that the proposed rule meets the requirements of IC 13-14-8-4, IC 13-17-3-4 and IC 13-17-1-1. IDEM has not justified the proposed rule in terms of the requirements of Indiana rulemaking statutes, and the rule is not necessary to implement the CAA, because the existing federal NESHAP must be presumed to be sufficient for that purpose. The board is only empowered to adopt a rule "as necessary to the implementation of the federal Clean Air Act (CAA)." IC 13-17-3-4(2). Exide's current measured stack emissions are, in fact, less than the lead limits proposed in the new rule and this fact is proof that the new proposed lead limits are not necessary to protect human health or the environment. Exide demands that such a NESHAP comply with state law by being <u>necessary</u>, under IC 13-14-8-4 and IC 13-17-3-4 and Exide's compliance history shows that the new rule is not necessary. (EC)

Response: This rulemaking follows all relevant provisions of the Indiana Code. IC 13-14-8-4 states that in adopting rules and establishing standards, the following must be taken into account: (1) All existing physical conditions and the character of the area affected; (2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas; (3) Zoning classifications; (4) The nature of the existing air quality; (5) Technical feasibility; (6) Economic reasonableness; and (7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to human life or the reasonable enjoyment of life and property. IDEM believes the proposed rule is necessary to ensure lead emissions do not significantly increase, as would be allowed under the less stringent, federal emission limits. The right of all persons to enjoy access to clean air would be protected by applying the same emission limits to all lead smelters in Indiana.

IC 13-17-3-4 states the following, including its reference to IC 13-17-1-1: The board shall adopt rules that are consistent with the general intent and purposes of air pollution control laws to

maintain and safeguard the purity of the air through the prevention, abatement, and control of air pollution by all practical and economically feasible methods, and necessary to the implementation of the federal Clean Air Act, as amended in 1990. IDEM believes the proposed rule is clearly within the authority granted and is consistent with the statutory requirements for rulemaking.

Comment: The addition of high efficiency particulate air (HEPA) filters to baghouses is not based on a U.S. EPA determination that HEPA filter and baghouse combinations are the maximum achievable control technology (MACT). The fact that some regulated sources place HEPA filters after their baghouses does not necessarily mean that HEPA filters/baghouse combinations constitute MACT. The addition of HEPA filters was offered in the federal rule as an alternative to certain bag leak detection requirements, and was not recognized as necessary in combination with other technologies. In general, placing different technologies in series should not be recognized as a means of achieving MACT. Such an approach could be applied to any regulated source, because emission controls could always be added in series to improve performance slightly. However, such an approach would quickly become economically unreasonable, in light of the slight environmental benefit gained. Exide's baghouses are already more than 99% efficient. IDEM has not demonstrated that this slight benefit will justify the expense of a redundant control system such as HEPAs. (EC)

Response: The existing lead rules of Article 15, applicable just to Quemetco, require HEPA filters on process fugitive and fugitive dust stacks. IDEM believes it is necessary to retain this requirement for Quemetco, and believes it is appropriate to require Exide to install HEPA filters for new emission units, unless they are vented to control devices operating prior to the effective date of this rule. IDEM has not proposed the installation of HEPA filters on currently operating baghouses at Exide.

IDEM considers the use of high efficiency, second-stage fabric filters placed in series with first-stage fabric filters to be reasonable considering the heightened likelihood of fine lead particulates bleeding through recently cleaned or replaced bags until a dust cake has been reestablished on its surface, thereby covering the small holes normally present in first-stage fabric filters. The intent of MACT is to force poorly-controlled sources to install available and cost-effective control devices that are in use by enough sources.

Comment: IDEM has expressed concerns that the national ambient air quality standard (NAAQS) may be threatened if Exide is allowed to backslide toward the federal limit, instead of keeping its emissions at their current low level. This concern is not supported by substantial evidence for two reasons: (1) IDEM has no evidence or data showing that Exide will backslide or that the NAAQS attainment will be threatened or exceeded if the new rule is not adopted; (2) IDEM has ignored evidence that Exide's adherence to its permit that mandates the operation and maintenance of pollution control equipment sufficient to keep emissions at their current low level will continue to be adequate to protect human health and the environment, and to maintain the

NAAQS. IDEM wrongly asserts that the existing federal NESHAP does not provide an adequate margin of safety. IDEM has not supported this assertion with data applicable to conditions at and around facilities to be regulated by the proposed rule. Further, IDEM ignores the fact that Exide's emissions are and will remain well below existing limits as a result of Exide's compliance with its permit. Exide's proposal to reduce limits to 50% of the current federal standard should be more than adequate to provide the desired margin of safety, if health is indeed IDEM's concern. (EC)

Response: Regarding Exide's permit requirements, the lead smelting NESHAP is simply referenced at Section D.1.3, without other substantive additional requirements in the section entitled Facility Operation Conditions, other than production limitations to keep emissions below major source thresholds. IDEM believes the NESHAP allows minimal reporting regarding HEPA filter monitoring, and only a minimally descriptive summary is required for the maintenance and monitoring of baghouses at lead smelters, compared to other promulgated MACT standards and state rules. Rather than adding to the reporting and record keeping burden, IDEM believes a fair, uniform, and more stringent set of requirements regarding performance testing to a lower emission limit is appropriate, since Exide has regularly shown an ability to easily comply with the proposed limits, and to serve as a check on possibly increased emissions over time.

The federal MACT standard would allow Exide a much higher emission limit than the proposed rule, therefore the possibility exists that Exide could legally increase emissions if subject only to the less stringent rule. One objective of the proposed rule is to discourage this permissible inducement to regress and increase emissions, thereby providing some assurance of protection to people living within range of lead smelters. U.S. EPA has stated that residences located within thirty (30) miles of a lead smelter similar to the size of Exide are considered to be exposed to hazardous air pollutant (HAP) emissions. Therefore, there exists a significant health benefit considering the number of people affected and the carcinogenicity of HAPs, in addition to lead poisoning. Exide and Quemetco may, in fact, continue their high standard for operating and maintaining pollution control equipment. However, because the MACT standard has created a wide gap between current performance and allowed performance, thereby increasing the possibility of backsliding, IDEM believes a compelling need exists to adopt these new requirements.

Regarding Exide's comments about the NAAQS ambient air standard and an adequate margin of safety, IDEM references the Response to Comments from the Second Comment Period for a more complete discussion. However, it should be kept in mind that the NAAQS for lead was written before the science made it clear that lead damages children at much lower levels than previously thought. This is a prime example of a standard based on risks to adults without adequately considering the special sensitivity that children have. Lead passes easily through a young child's blood-brain barrier causing extensive, permanent damage.

Regarding Exide's proposal to reduce the MACT limit by fifty percent (50%), or one (1.0) mg/dscm, applicable to all lead stacks, IDEM references the response below concerning the

rationale for setting a limit of one (1.0) mg/dscm for process sources and five-tenths (0.5) mg/dscm for all other stacks.

Comment: IDEM has asserted that geographical concerns are not relevant to a determination of the need for a new state secondary lead smelter NESHAP. However, such concerns are directly relevant under IC 13-14-8-4(1), (2) and (3). IDEM should further consider that Quemetco is located in a densely populated, urban area, with numerous residents living very close to Quemetco's facility. This is not the case for Exide's Muncie facility where zoning restrictions ensure that no persons will live nearby. IDEM has rejected the relevance of zoning classifications on the grounds that U.S. EPA has determined that lead emissions may affect persons living up to 30 miles from the affected source. Yet U.S. EPA has nevertheless found the existing federal NESHAP to be adequate to protect such persons. Further, IDEM has not shown that such persons are being affected by emissions from Exide's facility or would be affected if the proposed rule is not adopted. (EC)

Response: The MACT standard is a technology-based standard, not a health-based standard. Pursuant to Section 112(d) of the CAA, MACT is to be developed based on the effectiveness of the best controls currently available. The assertion by Exide that U.S. EPA has already found MACT to adequately protect public health is misleading. This is clear because U.S. EPA has not yet made a residual risk determination for lead smelters under Section 112(f)(2) of the CAA. The U.S. EPA report entitled "A Case Study Residual Risk Assessment for EPA's Science Advisory Board Review - Secondary Lead Smelter Source Category", dated January 2000, will be presented to the Science Advisory Board for comment on March 1-2, 2000, and states that it presents a range of available risk assessment methodologies they plan to use in subsequent residual risk determinations. U.S. EPA states in the introduction that they chose the lead smelter source category as a case study because these sources emit many carcinogenic air pollutants, and it is among the first for which they are required to make a regulatory decision.

Regarding Exide's comment on geographical concerns, IDEM believes U.S. EPA's justification for applying similar emission limits to similar sources, regardless of their geographical location, has been well documented. U.S. EPA considered a number of factors such as the quantity of emissions, population exposure, geographical distribution, and the toxicity of benzene, arsenic, nickel, chromium, and lead known to be emitted from secondary lead smelters. The first four HAPs mentioned have been classified as "known human carcinogens" by U.S. EPA. While Exide's more rural location may be relevant for consideration, IDEM does not believe it should be the overriding factor in setting an emission limit for lead.

Exide contends that IDEM must show that persons surrounding their facility in Muncie are being affected by these various emissions that have carcinogenic, neurologic, reproductive, and developmental effects. Zoning restrictions are not intended to protect public health from airborne pollutants. Based on considerable performance testing of each stack at both smelters over many years, it is expected that neither Exide nor Quemetco would find it necessary, as a

result of this rulemaking, to install additional emission controls for existing operations. IDEM believes the proposed rule is reasonable and necessary.

Comment: The proposed secondary lead smelter NESHAP sets a bad regulatory precedent, because it asserts that regulated sources should not operate with any margin of error, by determining that limits should be reduced whenever a source exceeds regulatory requirements. Exide admits that its actual emissions have for years been less than the limits in the proposed lead smelter NESHAP. However, this is no reason to reduce the limits in the current federal rule to just above Exide's actual emissions. Exide finds that it is prudent to comply with a healthy margin of error so that, in the unlikely event of a problem with its control equipment, Exide will nevertheless remain in compliance. By unnecessarily proposing to push the regulatory limits down, IDEM would remove the margin of safety. Exide, or other compliant, NESHAP-regulated sources, should not be pushed into a situation where they are at risk of noncompliance, without showing that the more stringent limitations are necessary to protect human health and the environment. IDEM's approach to NESHAP rulemaking would not encourage sources like Exide to perform better than existing standards. If such performance will merely result in radical reductions of existing limits, it would make more sense for such sources to perform just well enough, to avoid the adoption of new regulations that will make compliance progressively more difficult and more expensive. Exide wishes to make clear that it is not challenging any and all regulation. Exide simply wishes to limit the scope of new regulation to what is necessary, in accordance with state law. A reasonable reduction in the existing limits would be a significant 50% reduction in the limits in the federal rule, or 1.0 mg/dscm, applicable to all lead stacks, instead of the fourfold decrease applicable to certain stacks not associated with process sources. This compromise is supportable in terms of state rulemaking requirements and should be preliminarily adopted by the board as an alternative to IDEM's proposal. (EC)

Response: IDEM appreciates the compromise proposed by Exide regarding the emission limit of one (1.0) mg/dscm applicable to process sources. The goal of applying similar emission limits to similar processes throughout the state would be met under the proposed rule. This emission limit was selected by IDEM primarily because it is no more stringent, and no less stringent, than existing state requirements applicable to Quemetco under current state rules, although there has been a conversion of units from pounds per hour.

The primary rationale for IDEM proposing the emission limit, five-tenths (0.5) mg/dscm, for process fugitive and fugitive dust stacks, has been based on existing state emission limits under Article 15, Lead Rules, in addition to performance test results from Indiana smelters and other lead smelters throughout the U.S. IDEM believes ample justification exists for proposing two different emission limits, rather than following U.S. EPA's use of a single limit for each type of operation. A process source is defined as the exhaust directly from a high temperature smelting furnace. An example of a process fugitive source is a refining kettle. Battery breaking areas, material storage and handling areas are examples of fugitive dust sources. IDEM's experience over many years with several lead smelters in Indiana in reviewing stack test results shows the

concentration of lead varies considerably between furnace exhaust and general ventilation of other operations.

Quemetco has long been subject to an emission limit on its process fugitive/fugitive dust stacks that is, in terms of a lead concentration limit, ten (10) times more stringent than the limit on its process sources. Comparing these two categories of sources using the units currently in the state rule, pounds per hour, yields an even greater difference by a factor of sixty-seven (67). Therefore, the proposal by IDEM to set two different emission limits, one (1.0) mg/dscm and five-tenths (0.5) mg/dscm, for two different types of sources, is based on continuing what IDEM has already established. (The conversion from a 'weight of lead per hour' limit to a concentration limit of 'weight of lead per volume of air' is based on the ventilation rate of the particular stack).

Additionally, the use of two different emission limits is based on performance test data at both Exide and Quemetco. The arithmetic mean of Exide's process sources is about three (3) times higher than the arithmetic mean of Exide's process fugitive/fugitive dust sources, based on all available test results since 1991. The arithmetic mean of process baghouse exhaust at all lead smelters throughout the U.S., according to U.S. EPA summary tables, is about nine-tenths (0.9) mg/dscm. The arithmetic mean of process fugitive emissions from all lead smelters is about three-tenths (0.3) mg/dscm, indicating, first, that nationwide testing results show a disparity similar to that found at Indiana's smelters. These test results also indicate that IDEM's proposed limits of one (1.0) mg/dscm and five-tenths (0.5) mg/dscm are a bit higher than the national average of all 23 lead smelters.

Exide's average emissions from process fugitive and fugitive dust stacks, using all results, is thirteen hundredths (0.13) mg/dscm, significantly less than the proposed limit of five-tenths (0.5) mg/dscm. Every test report from Exide and Quemetco has shown emission rates less than five-tenths (0.5) mg/dscm for all stacks controlling these types of sources. Exide's suggestion of setting an Indiana limit of one (1.0) mg/dscm across the board, applicable to all types of sources at lead smelters, would have the effect of raising the existing emission limit for Quemetco's nine (9) process fugitive and fugitive dust stacks by an unacceptable margin. Increasing Quemetco's existing emission limit from one-tenth (0.1) mg/dscm to one (1.0) mg/dscm represents an increase by a factor of ten (10). IDEM's proposed limit of five-tenths (0.5) mg/dscm represents a more moderate compromise in the effort to attain a "level playing field". IDEM believes two (2) different emission limits are reasonable and necessary. IDEM considers both of these limits to be equitable and consistently achievable by Exide and Quemetco, and provide an adequate compliance cushion. Further explanation on IDEM's selection of five-tenths (0.5) mg/dscm can be found in IDEM's Response to Comments from the Second Comment Period, as presented above.

Comment: IDEM has not demonstrated the need for a five percent (5%) opacity limitation on baghouses. IDEM admits that the primary means of ensuring baghouse compliance are already found in Exide's operating permit including leak detection systems and operation and

maintenance requirements. IDEM also agrees that Exide's leak detection systems are very sensitive, and will identify leaks long before opacity is detected. Another layer of monitoring requirements to identify incidents of "gross nonperformance" is simply unnecessary. Further, IDEM has not responded to Exide's comment that it is virtually impossible to identify five percent (5%) opacity with any degree of accuracy. (EC)

Response: IDEM believes the proposed opacity limit should be readily ascertainable to an inspector of a lead smelter as a backup compliance tool. The proposed rule does not add another layer of monitoring, reporting, or record keeping requirements on lead smelters. If any visible emissions occur, as determined under Reference Method 9, from a baghouse controlling a process source, for example, then the concentration of lead would be about ten (10) times the emission limit of one (1.0) mg/dscm, according to U.S. EPA estimates. Therefore, it is expected plant personnel will have already responded to an alarm from the bag leak detection system, as required in the NESHAP, or if such a system is not used, as allowed in some cases by the federal rule and the proposed state rule, this opacity limit will serve, in any case, as an alternate compliance requirement. IDEM inspectors are trained to identify opacity in increments of five percent (5%), with five percent (5%) being the minimum level.

Comment: IDEM has not demonstrated the need to monitor for negative pressure at Exide's facility. Exide has pointed out that maintenance of its baghouse systems ensures that its buildings are maintained at negative pressure. The fact that systems are available to afford yet additional assurance does not make such systems necessary. IDEM has failed to identify either benefits or costs of continuous monitoring for negative pressure. Exide regularly tests for negative pressure, albeit not continuously, but this, combined with a myriad of permit requirements applicable to its baghouses, is sufficient to address IDEM's fugitive emissions concerns. (EC)

Response: IDEM has reviewed the costs to be incurred by Exide under the proposed rule. The primary reasons for this requirement include the fact that Quemetco has been subject to an identical requirement for several years, and IDEM believes the benefits of continuous monitoring outweigh the cost. For a more complete discussion, as it relates to operable ventilation systems, IDEM would reference the Response to Comments from the Second Notice of Comment Period.